IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Mark D. Conover

Docket no. 2134

Serial no : 09/168,644

Filed : October 8, 1998

For : ENCODING A STILL IMAGE
INTO COMPRESSED VIDEO

Art Unit : 2613

Examiner: Richard J. Lee

DECLARATION OF MARK D. CONOVER

I, MARK D. CONOVER, declare that:

1.   I am 52 years old and reside at 10721 Wunderlich Drive, Cupertino, California 95014.

2.   In 1972, I received a Bachelors of Science degree in computer science from Carnegie Mellon University. Subsequently, in 1975, I received a Masters degree in computer science from Rensselaer Polytechnic Institute

3.   I am a co-founder of PixelTools Corporation ("Pixel Tools"), the assignee of the patent application identified above, and presently hold the position of Chief Technical Officer in the corporation.

4.   For at least the preceding 8 years I have been employed as a consultant computer programmer designing and implementing various products for various different companies that are based upon several of the various different Moving Picture Experts Group ("MPEG") standards.

5.   I am the applicant identified above for this patent application.

6.   I have reviewed the Examiner's Action dated October 11, 2002, that issued for this patent application, particularly:

    a.   United States Patent no. 5,404,446 entitled "Dual Buffer Video Display System for the Display of Asynchronous Irregular Frame Rate Video Data" which issued April 4, 1995, on an application filed by Ronald J. Bowater, Barry K. Aldred and Stephen P. Woodman ("the Bowater, et al. patent"); and

    b.   United States Patent no. 5,838,678 entitled "Method and Device for Preprocessing Streams of Encoded Data to Facilitate Decoding Streams Back-to Back" which issued on an application filed July 24, 1996, by Joseph W. Davis and Shawn M. Hayes ("the Davis, et al. patent").

7.   The Bowater, et al. patent addresses a problem of visual flickering which occurs in real-time when frames of compressed motion video arrive irregularly.

8.   The Bowater, et al. patent solves the preceding problem by adding a double buffer, and, in real-time, repeating or deleting frames as necessary.

9.   The real-time solution disclosed in the Bowater, et al. patent, as expressly acknowledged in the patent's text, from time-to-time causes the motion video being displayed in real-time to freeze.

10.   The Davis, et al. patent addresses a problem in real-time decoding of a transport stream that contains both compressed video

and audio data which may cause a one (1) second interruption to occur in displayed video.

11. As disclosed in the Davis, et al. patent, the one (1) second interruption in displayed video occurs if both the video and audio decoders must be reset at a juncture between two sequential programs with independent time bases that have been concatenated in a single transport stream.

12. The Davis, et al. patent solves the preceding problem by preprocessing multiplexed streams of packetized, encoded, audio and video sequences to produce a transport stream which:

    a.   an audio decoder can decode the encoded audio sequence to produce an audio sequence; and

    b.   a video decoder can, without being reset, decode the encoded video sequence to produce a video sequence.

13. The preprocessing disclosed in the Davis, et al. patent solves this video decoding problem when a transport stream contains two, concatenated independent MPEG stream sequences by cutting the offending segments out of the concatenated MPEG stream sequences.

14. The invention disclosed and claimed in my patent application identified above converts a single frame of digitized video data into an elementary compressed video stream.

15. The patent application teaches how to make a visual high quality single MPEG frame sequence from a single frame of digitized video data, and eliminates a problem of visual pulsing in the decoded and displayed video frames.

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16. Thus, my invention does not deal with a real-time problem since frames of compressed video data produced in accordance therewith are regular in time, controllable during their generation, and are very predictable.

17. The "NULL" frames disclosed in the Bowater, et al. patent differ from the "NULL" frames disclosed in my patent application.

18. The "NULL" frames disclosed in the Bowater, et al. patent can actually be the fully uncompressed previous frame.

19. The "NULL" frames disclosed in the Bowater, et al. patent vary from frame to frame.

20. The "NULL" frames disclosed in my patent application are always compressed, contain identical compressed video, and provide a sequence of codes that cause an MPEG video decoder to display the previous frame exactly.

21. Regarding the rejection of claims 2 and 3 because the MPEG specification is always changing, my invention as disclosed in the pending patent application is applicable to all MPEG specifications from their first acceptance to present.
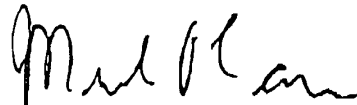
22. Historically, successive versions of the MPEG specifications don't change much since they make only a few corrections, clarifications, and minor changes where the industry has encountered a compatibility issue(s).

23. Thus, the MPEG specification is relatively constant, it has been burned into millions of pieces of silicon, distributed on millions of software operating systems, and forms a basis for thousands of system designs.

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24. In fact, despite minor changes occurring in the MPEG specification the invention disclosed and claimed in my patent application has been used successfully without change by one customer who has used it for several years probably in millions of instances!

25. I am unaware of any facts contrary to the facts and opinions contained in this Declaration.

26. I declare under penalty of perjury under the laws of the United States of America that all statements made herein of my own knowledge are true and correct, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of any patent issuing on the subject application.

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Mark D. Conover

Dated: _10 Jan_____, 200_3_